Ischiectomy for Pressure Sores

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• Ischiectomy with primary closure was carried out in five paraplegic patients with pressure sores. This operation, less extensive than the wide excision with full thickness graft that is now widely advocated, was successful in four of the five cases. In the fifth case none of the several attempts to heal the sores was in the least successful.

A WIDELY ADVOCATED TREATMENT for ischial pressure sores that are not adequately controlled by conservative treatment is excision of the ulcer and any sinus tract, removal of the ischial tuberosity or underlying bony prominence,[6,10,11] then full thickness pedicle graft to cover the defect.[4,5]

The purpose of the present communication is to review the development of the rationale for this treatment and to report results obtained by the authors with less extensive operative procedures.

Ischial ulcers, in general, are characterized by a small surface opening with a large cavity beneath, while sacral ulcers are usually large and flat with little undermining of the edges.

The first reported attempt at surgical closure of a pressure sore was by Lamon and Alexander[9] in 1945. They carried out secondary closures. Since then the literature has grown rapidly with new surgical and plastic techniques, but the incidence of break-down or recurrence was high until 1947, when Kostrubala and Greeley[7] advocated radical removal of bony prominences underlying the ulcers and subsequent shifting of adequate skin flaps. Two years later they recommended radical removal of the ischial tuberosity.[8] In 1950, Cannon[3] advocated that, if ischiectomy was done for a pressure sore on one side, prophylactic ischiectomy be done on the other side whether there was a sore there or not. Comarr and Bors[4] reported an excellent degree of success with ischiectomy and skin grafting in their large series.

As the surgical and plastic techniques are refined, the incidence of success seems to rise higher and higher. Also, the safety afforded by antibiotics with regard to operations in the usually contaminated areas about pressure sores has contributed in great measure to the efficacy of surgical treatment.

In the following five cases the operative procedures used for healing of pressure sores were less elaborate than those now widely recommended:

CASE 1. A 39-year-old man, paralyzed from the eighth thoracic vertebra for 16 years, had bilateral pressure sores of 18 months' duration. Ischiectomy with split thickness graft was done on the left, and a year later ischiectomy with relaxing incisions and primary closure was carried out on the right. The patient had had no recurrence two years after the first operation and a year after the second.

CASE 2. A 45-year-old patient with seven years of paralysis from multiple sclerosis had pressure sores of a year's duration, and bilateral ischiectomy with primary closure was carried out. A large sacral pressure sore developed a few months later. A sliding graft was applied and it took well. Four months afterward another pressure sore, in the presacral area, was excised and primary closure was done. The wound broke down, and two weeks later coccygectomy and partial sacralectomy (four bodies) were carried out. Within the next six months of observation, there was no recurrence at any of the operative sites.

CASE 3. A 51-year-old man with ependymoma of the cauda equina had an ulcer over the right ischium of two years' duration. It was excised and covered with a double pedicle flap. After two years, ulceration recurred at the same site, and it was excised, with primary closure, but promptly broke down again. A diagnosis of osteomyelitis of the right ischium was made. Secondary closure was carried out but the wound broke down again four months after the operation.

CASE 4. A 46-year-old patient, paralyzed by chordotomy for pain following disarticulation of the left hip, had a sacral pressure sore that had begun five years previously with a pimple on the left buttock, which developed into a sinus tract. Repeated operations, including saucerization of the ischial bone, were carried out. Osteomyelitis developed at the site and a sinus drained continuously. Left

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ischiectomy with primary closure was done. Two years later there had been no recurrence.

CASE 5. The patient, a 50-year-old man paralyzed from the tenth thoracic vertebra since laminectomy for hemangioma of the spinal cord two years earlier, had an ulcer over the right ischium of six months' duration. Conservative treatment—keeping the patient prone most of the day and night and application of Varidase® (streptokinase-streptodornase) and Neosporin® ointment (polymyxin B, bacitracin-neomycin)—was unavailing. Right ischiectomy, undermining the edges of the lesion, and primary closure were carried out. There was no recurrence.

RESULTS

Although the operative procedures were not as extensive as those advocated in the recent literature —primary closure was used, rather than full thickness grafts—in four of the five cases the results were gratifying. There was no recurrence at the previously affected sites. In one patient (Case 3) no procedure used to date has been successful.

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